FIG. 1

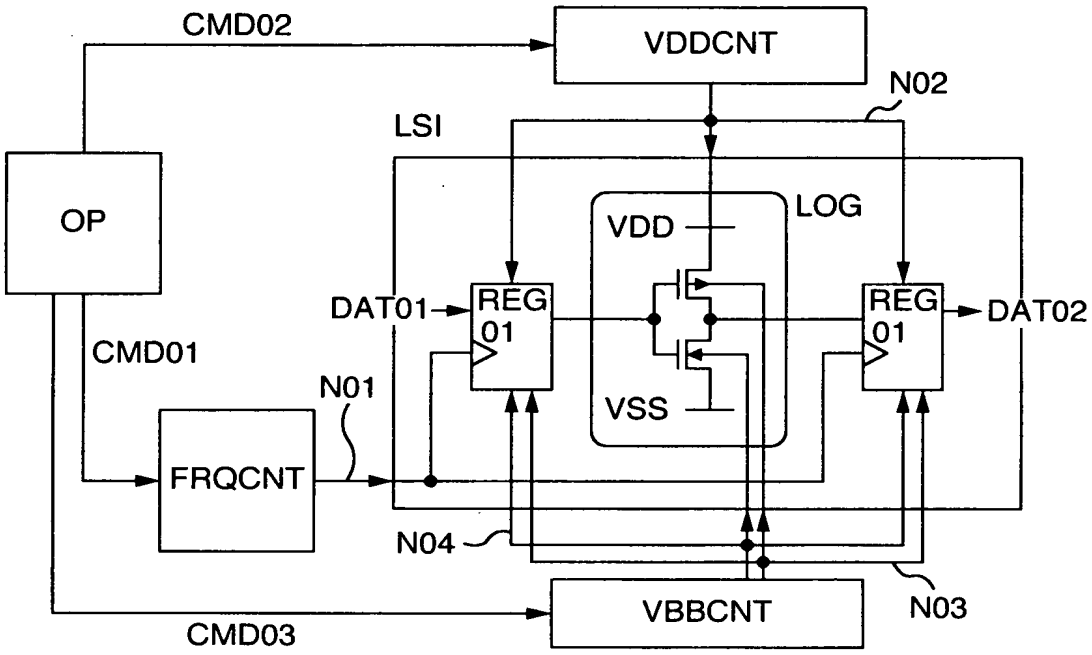

FIG. 2

FRQ	VDD (WITHOUT VBB)	VDD (WITH VBB)
200 MHz	1.7V	1.4V
100 MHz	1.2V	0.9V
50 MHz	1.0V	0.8V

FIG. 3

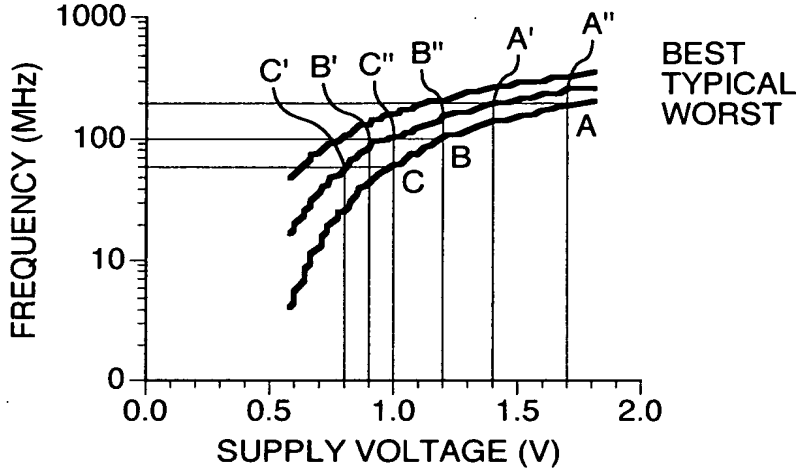
1000
100
10
0
FREQUENCY (MHz)
0.0
0.5
1.0
1.5
2.0
SUPPLY VOLTAGE (V)
C'
B'
C"
B"
A'
A"
A
B
C
BEST
TYPICAL
WORST

FIG. 4

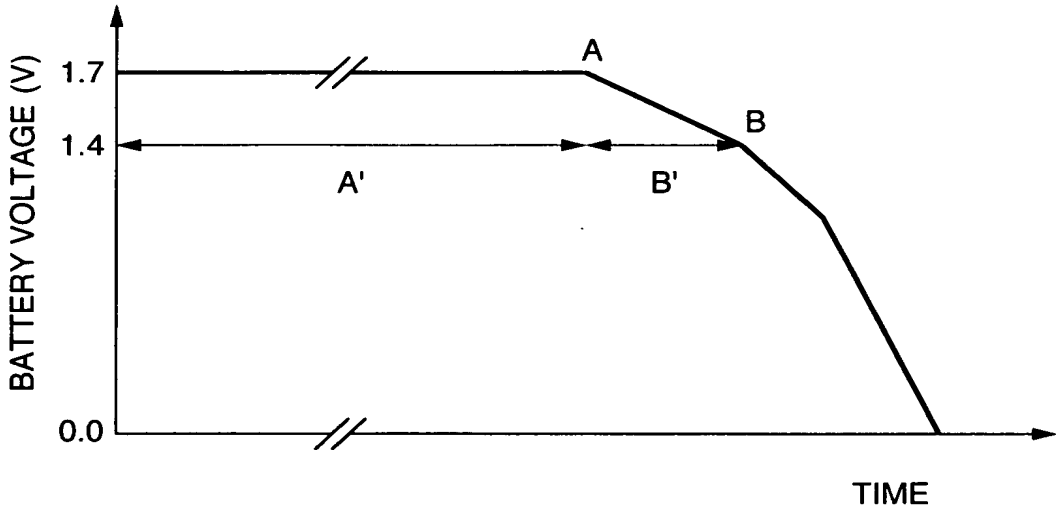
BATTERY VOLTAGE (V)
1.7
1.4
0.0
A
B
A'
B'
TIME

FIG. 5

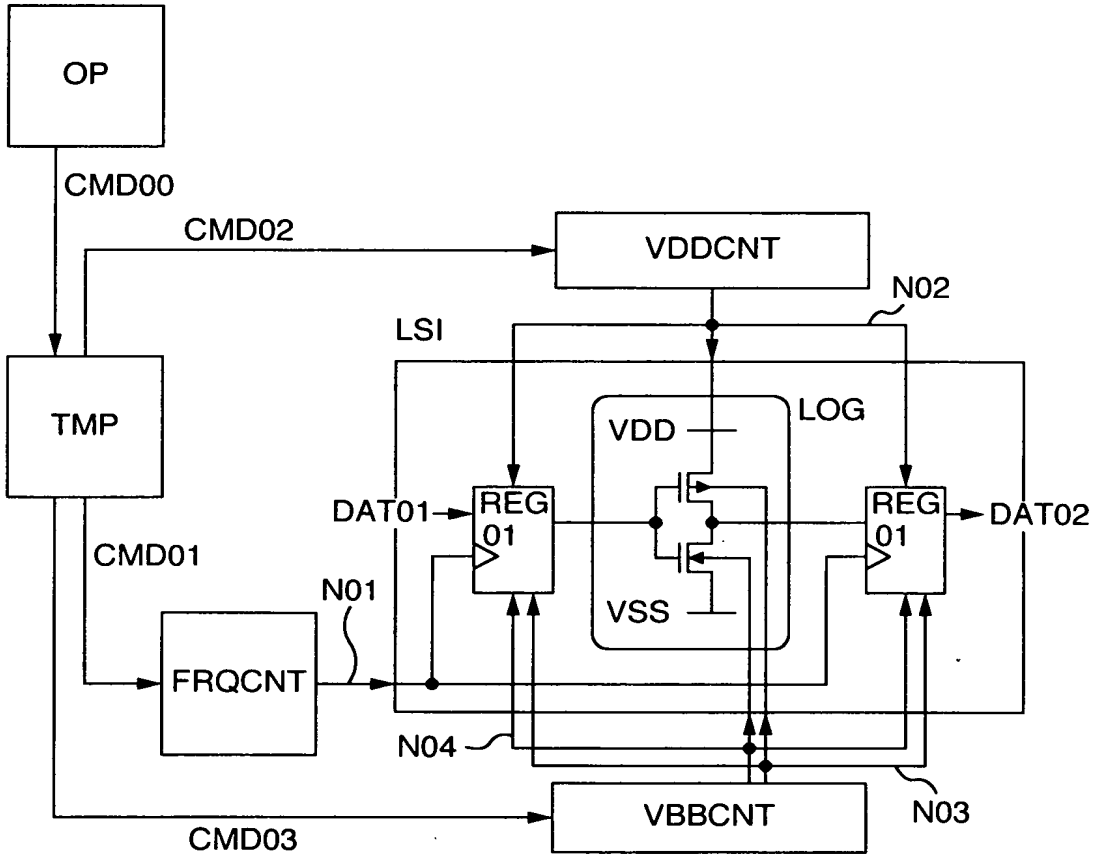
OP
CMD00
CMD02
VDDCNT
N02
LSI
TMP
LOG
VDD
DAT01
REG
01
REG
01
DAT02
CMD01
N01
VSS
FRQCNT
N04
VBBCNT
N03
CMD03

FIG. 6

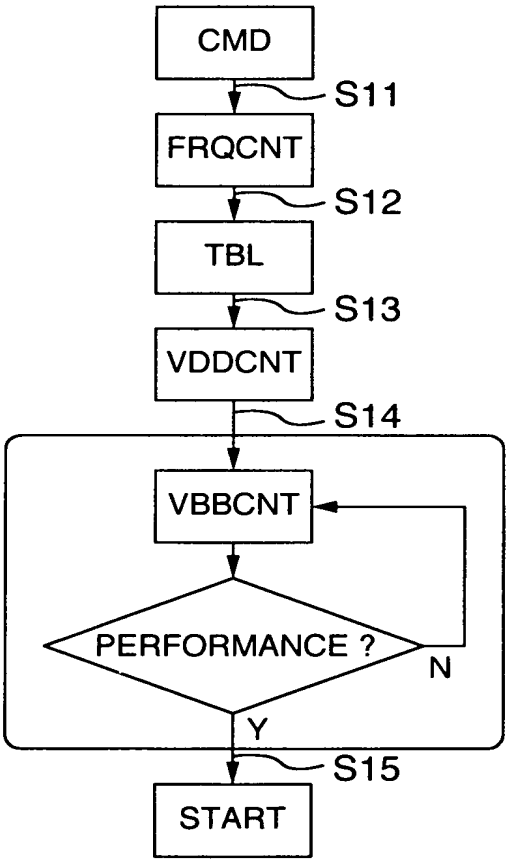
CMD
S11
FRQCNT
S12
TBL
S13
VDDCNT
S14
VBBCNT
PERFORMANCE ?
N
Y
S15
START

FIG. 7

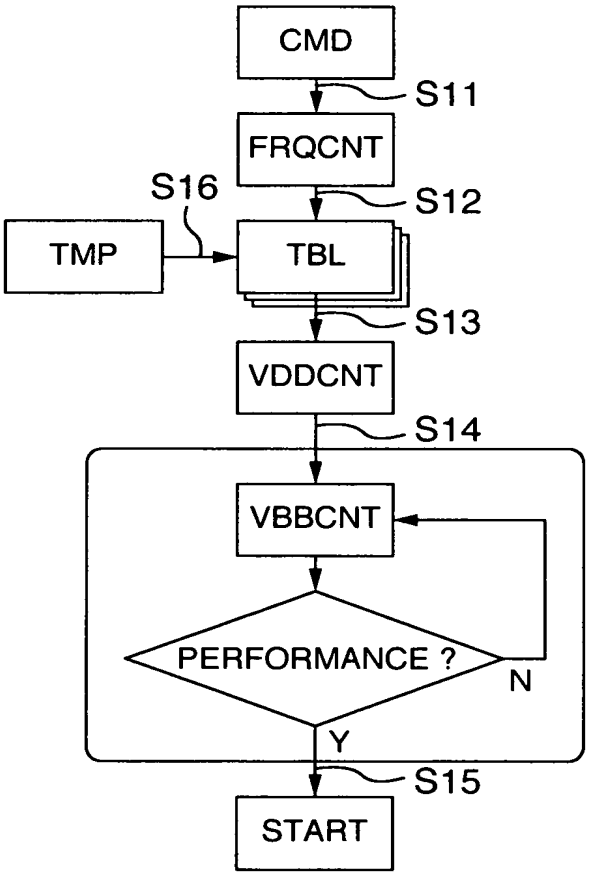
CMD
S11
FRQCNT
S16
S12
TMP
TBL
S13
VDDCNT
S14
VBBCNT
PERFORMANCE ?
N
Y
S15
START

FIG. 8

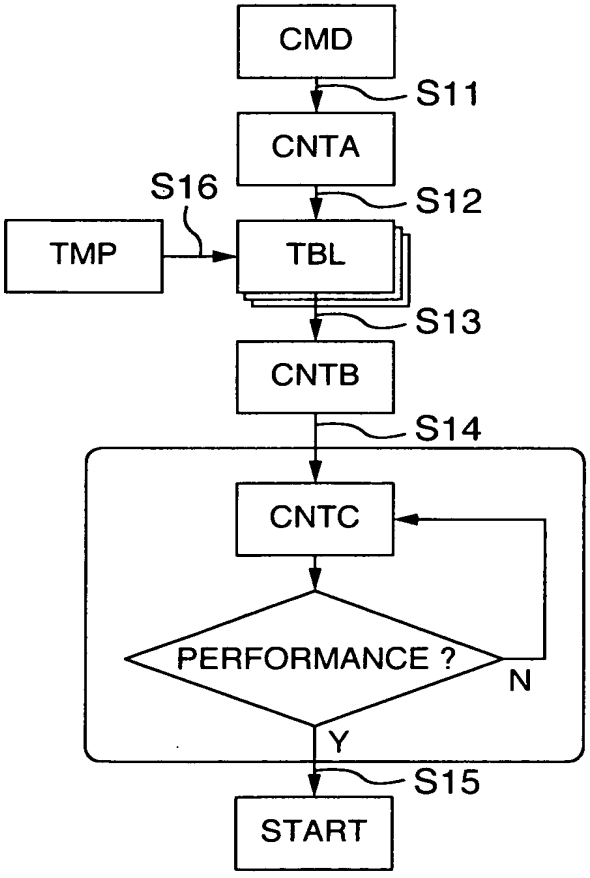
CMD
S11
CNTA
S16
S12
TMP
TBL
S13
CNTB
S14
CNTC
PERFORMANCE ?
N
Y
S15
START

FIG. 9

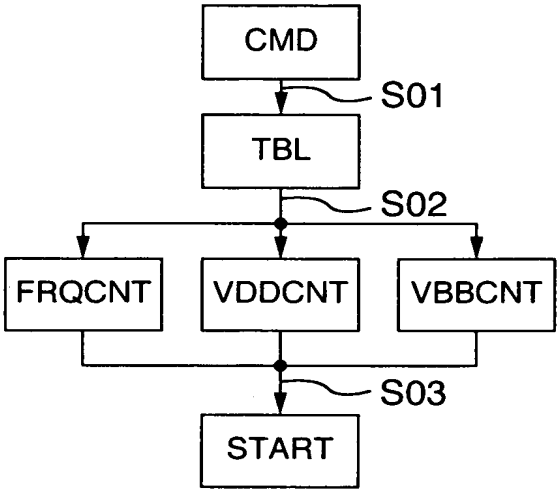
CMD
S01
TBL
S02
FRQCNT
VDDCNT
VBBCNT
S03
START

FIG. 10

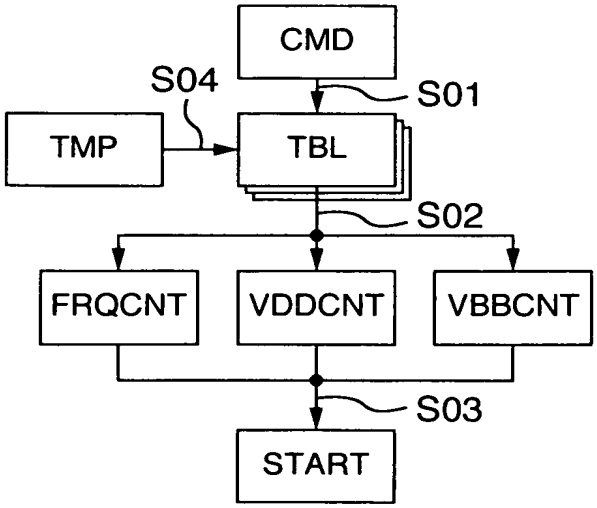
CMD
S04
S01
TMP
TBL
S02
FRQCNT
VDDCNT
VBBCNT
S03
START

FIG. 11

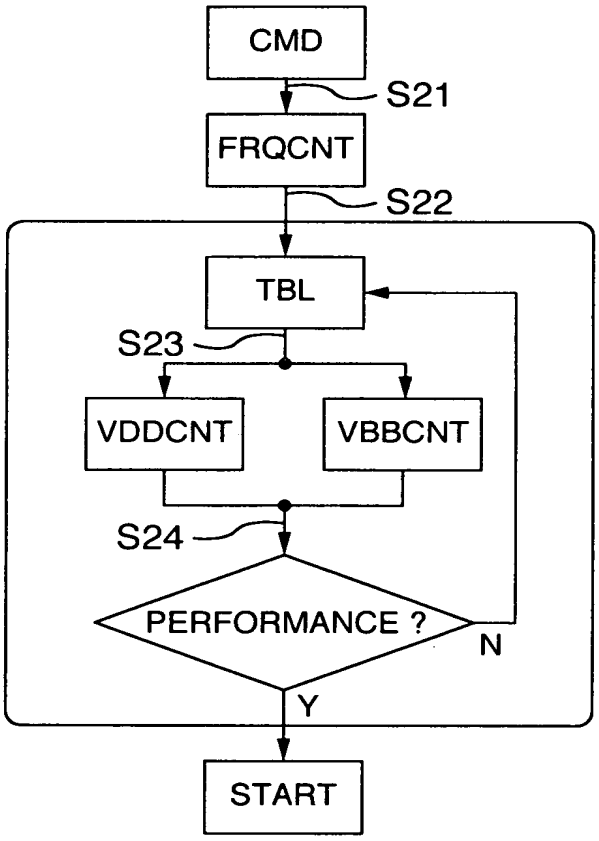
CMD
S21
FRQCNT
S22
TBL
S23
VDDCNT
VBBCNT
S24
PERFORMANCE ?
N
Y
START

FIG. 12

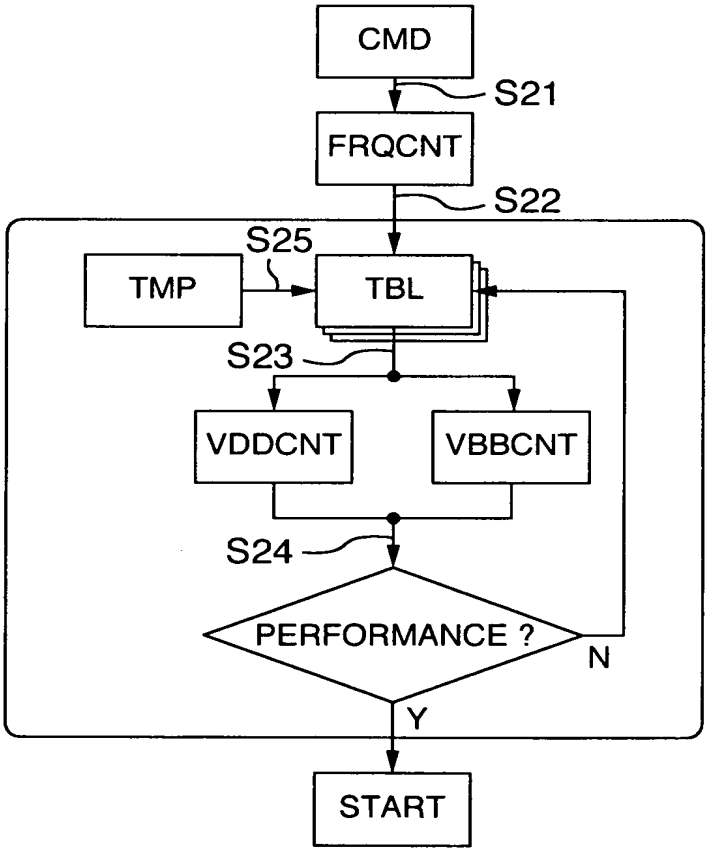
CMD
S21
FRQCNT
S22
S25
TMP
TBL
S23
VDDCNT
VBBCNT
S24
PERFORMANCE ?
N
Y
START

FIG. 13

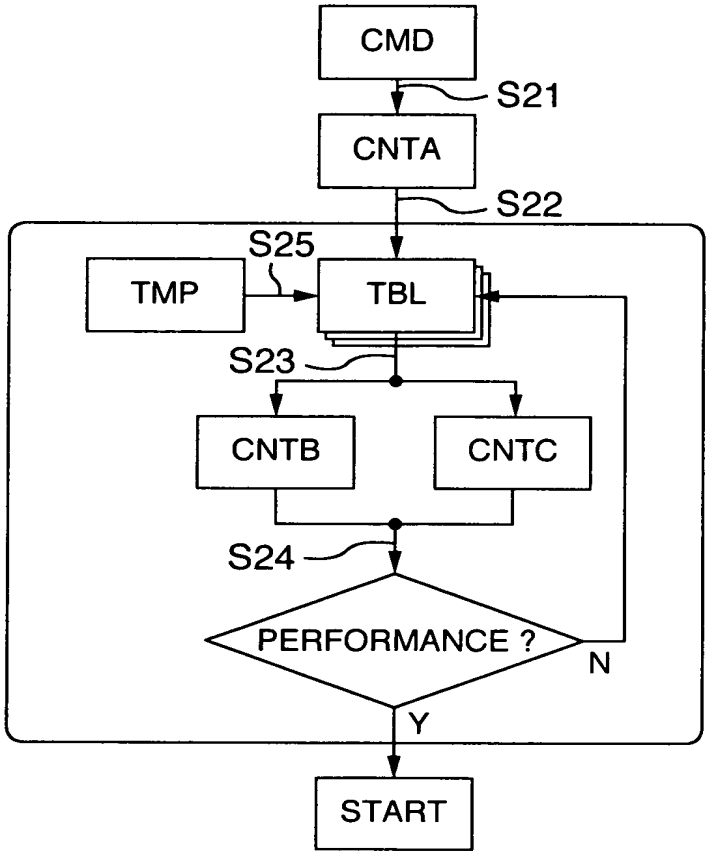
CMD
S21
CNTA
S22
S25
TMP
TBL
S23
CNTB
CNTC
S24
PERFORMANCE ?
N
Y
START

FIG. 14

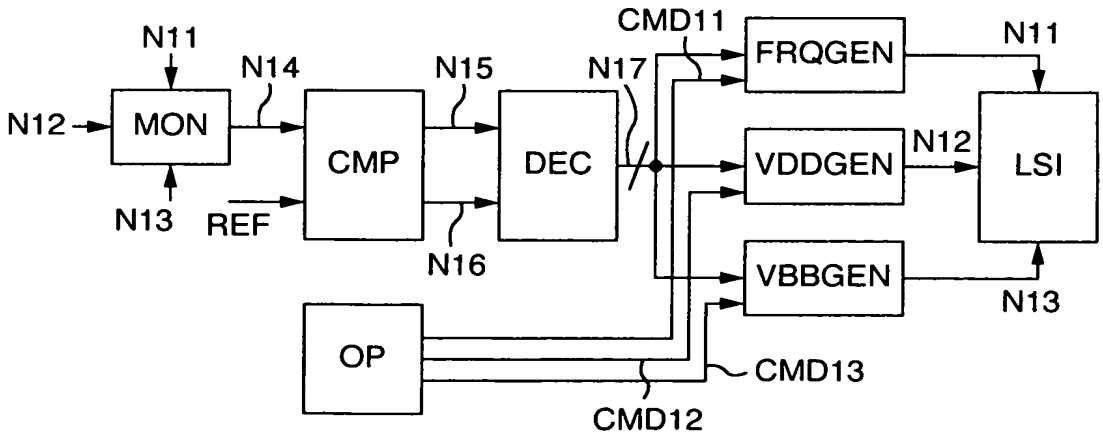
N11
N14
N15
N17
CMD11
FRQGEN
N11
N12
MON
CMP
DEC
VDDGEN
N12
LSI
N13
REF
N16
VBBGEN
N13
OP
CMD13
CMD12

FIG. 15

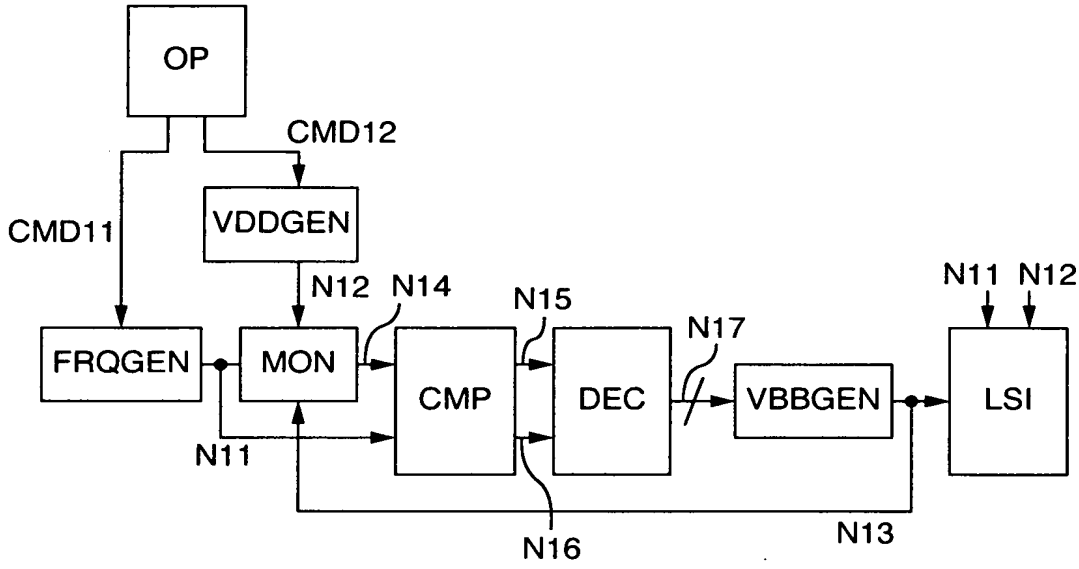
OP
CMD12
CMD11
VDDGEN
N12
N14
N15
N17
N11
N12
FRQGEN
MON
CMP
DEC
VBBGEN
LSI
N11
N16
N13

FIG. 16

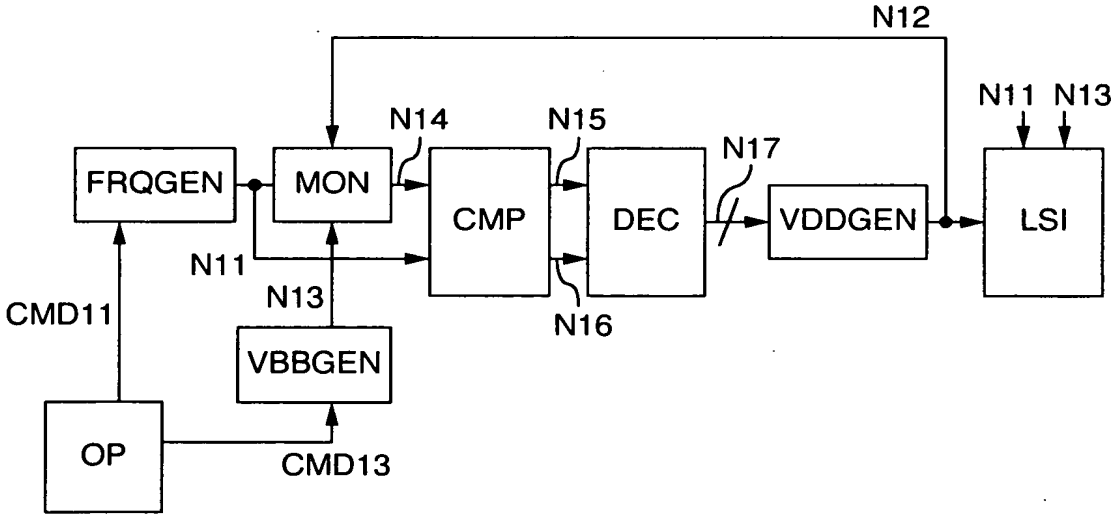
N12
N11
N13
N14
N15
N17
FRQGEN
MON
CMP
DEC
VDDGEN
LSI
N11
N13
N16
CMD11
VBBGEN
OP
CMD13

FIG. 17

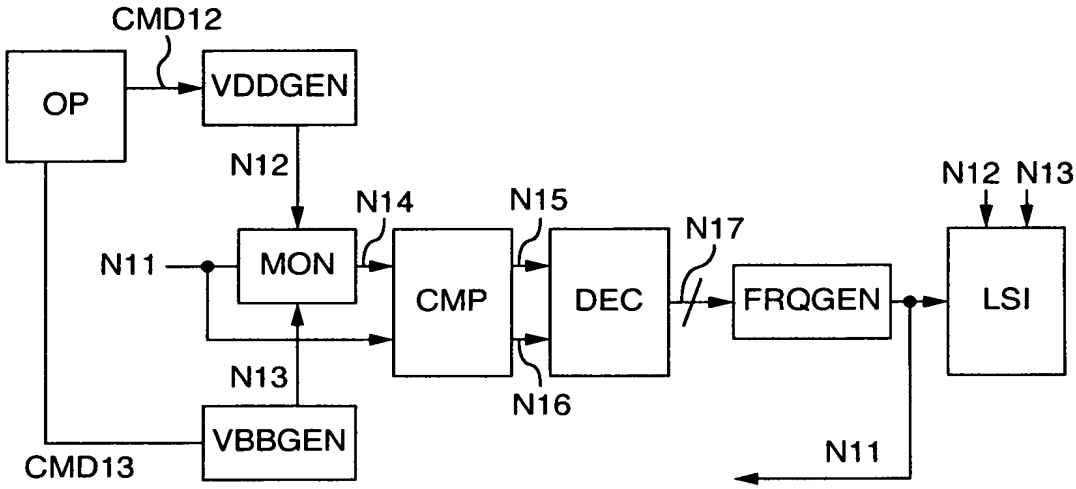
CMD12
OP
VDDGEN
N12
N14
N15
N17
N12 N13
N11
MON
CMP
DEC
FRQGEN
LSI
N13
N16
VBBGEN
CMD13
N11

FIG. 18

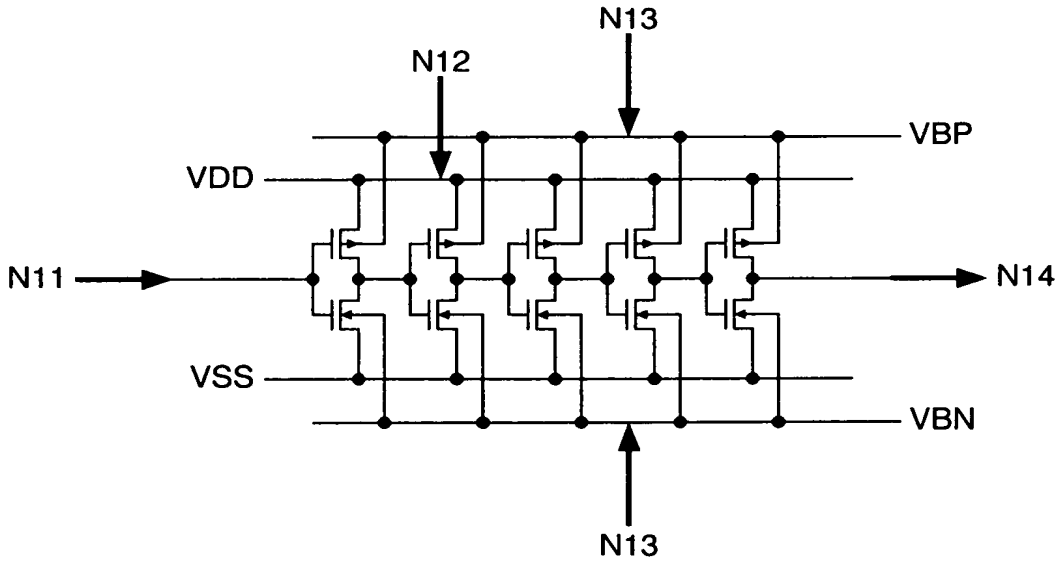
N13
N12
VBP
VDD
N11
N14
VSS
VBN
N13

FIG. 19

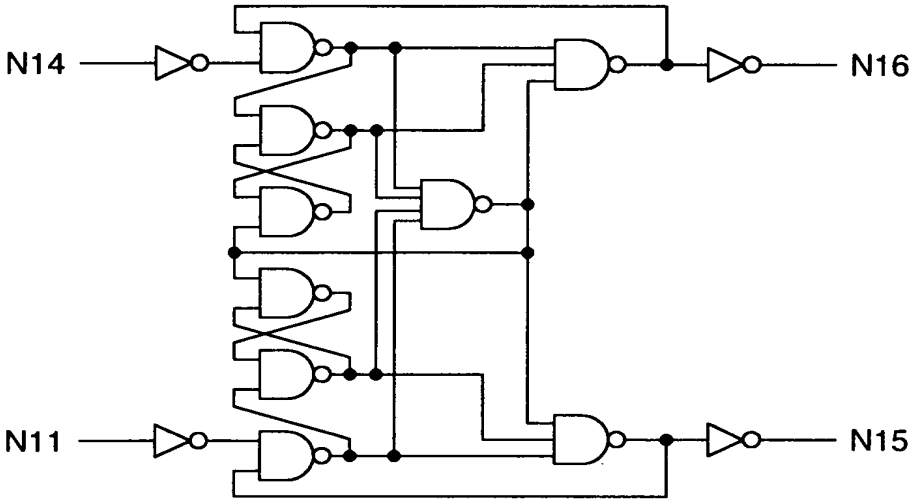

FIG. 20

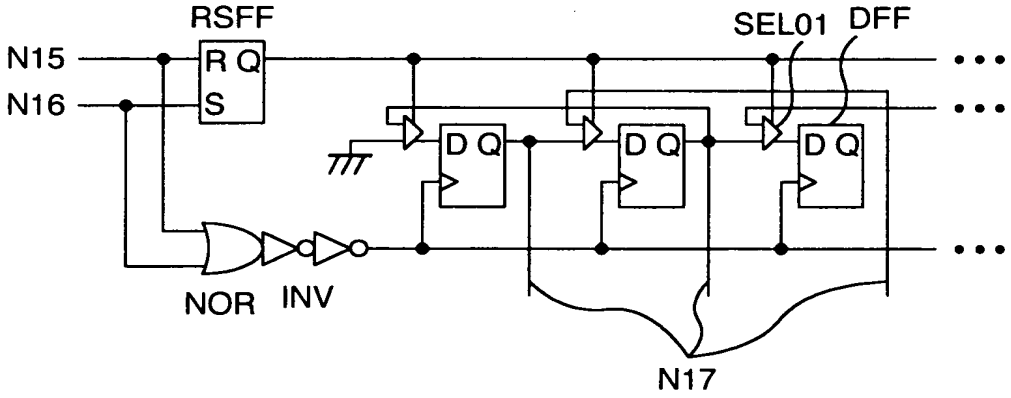

FIG. 21

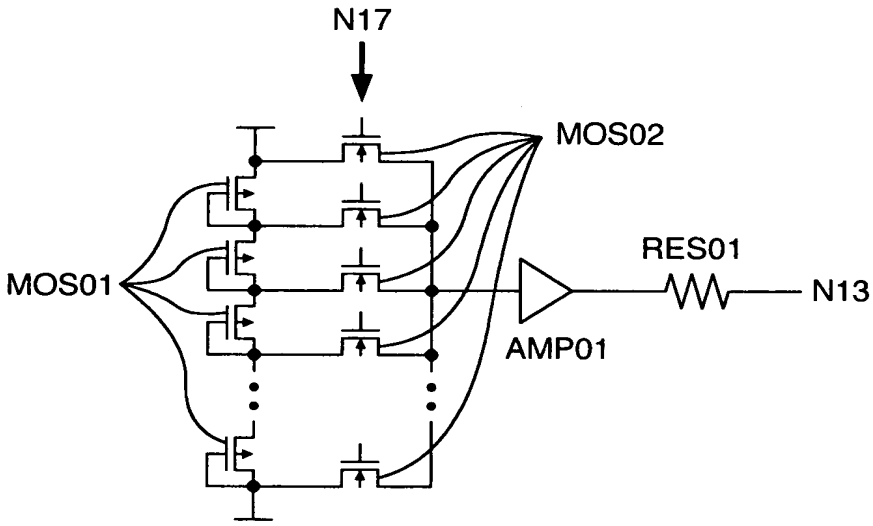
N17
MOS02
MOS01
RES01
N13
AMP01

FIG. 22

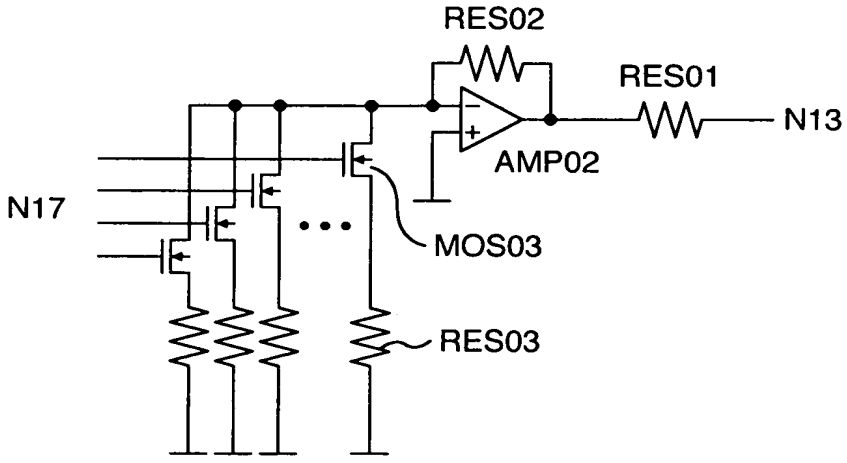
RES02
RES01
N13
AMP02
N17
MOS03
RES03

FIG. 23

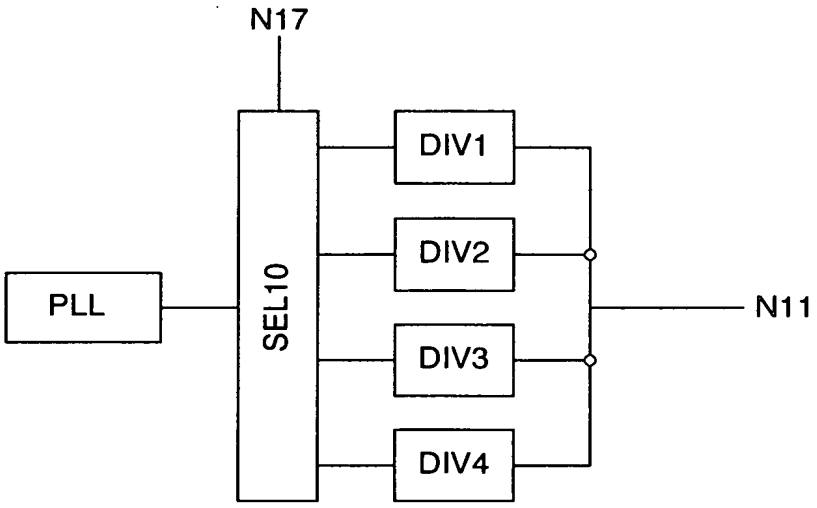
N17
DIV1
DIV2
DIV3
DIV4
PLL
SEL10
N11

FIG. 24

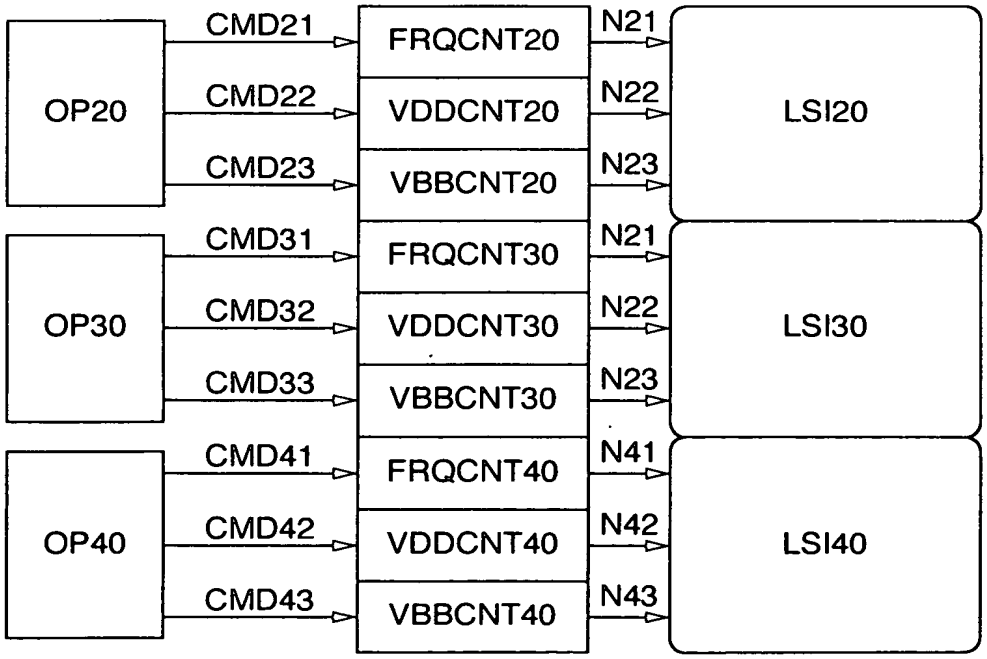
OP20
CMD21
CMD22
CMD23
FRQCNT20
VDDCNT20
VBBCNT20
N21
N22
N23
LSI20
OP30
CMD31
CMD32
CMD33
FRQCNT30
VDDCNT30
VBBCNT30
N21
N22
N23
LSI30
OP40
CMD41
CMD42
CMD43
FRQCNT40
VDDCNT40
VBBCNT40
N41
N42
N43
LSI40

FIG. 25

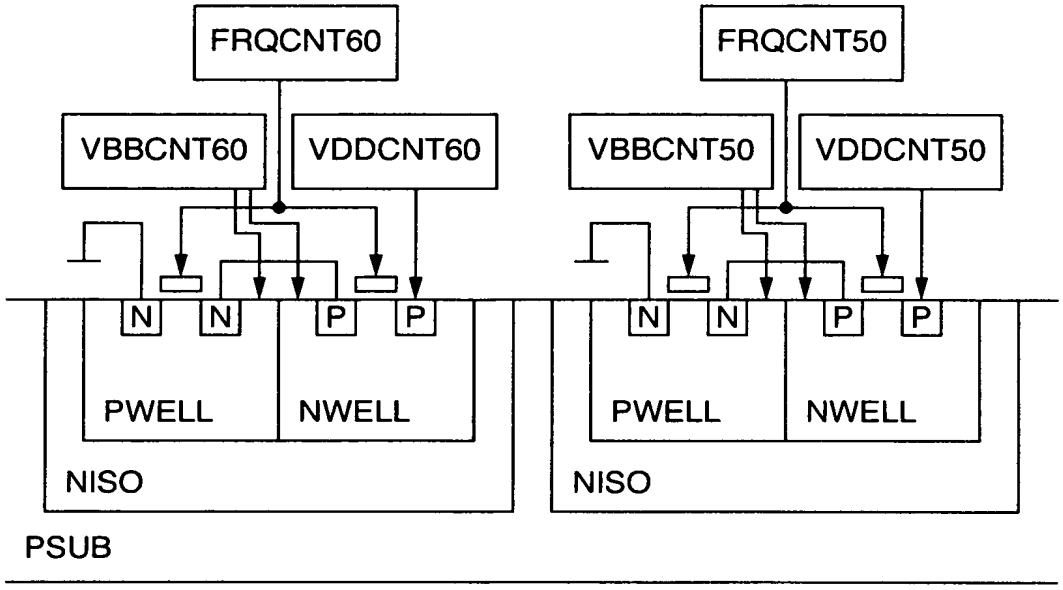
FRQCNT60
FRQCNT50
VBBCNT60
VDDCNT60
VBBCNT50
VDDCNT50
N
N
P
P
PWELL
NWELL
NISO
PSUB

FIG. 26

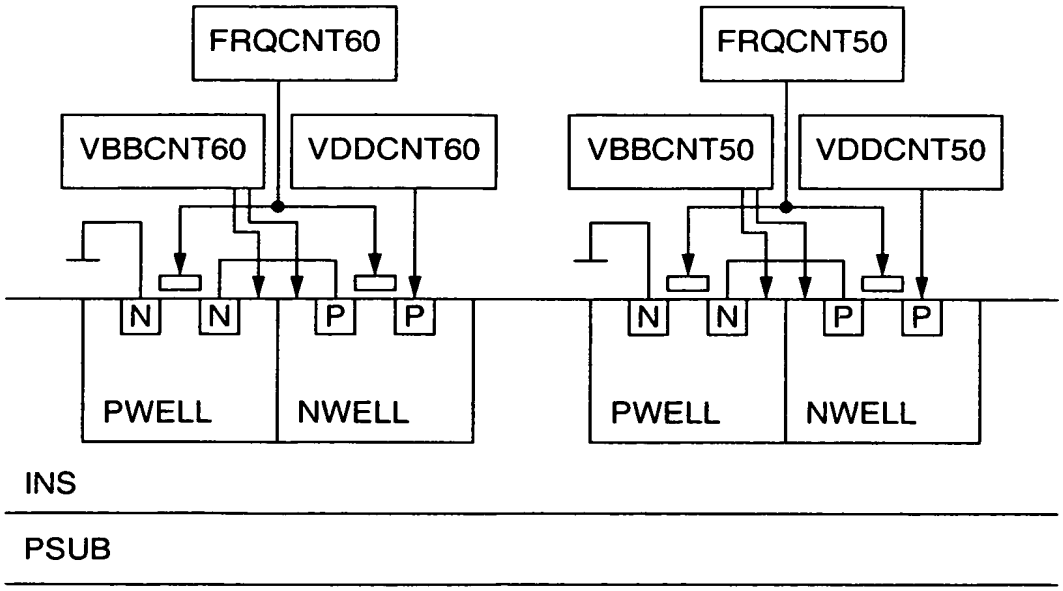
FRQCNT60
FRQCNT50
VBBCNT60
VDDCNT60
VBBCNT50
VDDCNT50
N
N
P
P
PWELL
NWELL
INS
PSUB

FIG. 27